

<i>M. rugosa</i> Bar.	<i>shaefferiana</i> ? Lea.
<i>Anodonta grandis</i> Say.	<i>salmonea</i> “
<i>plana</i> Lea.	<i>ferusacciana</i> “
<i>decora</i> “	<i>ferruginea</i> Lea.
<i>imbecillis</i> Say.	<i>stewartiana</i> Lea.
<i>ovata</i> Lea.	<i>subeylindrica</i> Lea.
<i>edentula</i> Say.	

ON A COLLECTING TRIP TO MONTEREY BAY.

BY WILLIARD M. WOOD.

The editors of the NAUTILUS have asked me to write a short article for the NAUTILUS, while I am here, on my trip to this once famous collecting ground.

Now that I am about to leave for San Francisco, I feel sorry to think that I have not devoted more time to the collection of specimens. Of course, there have been many long drives to be taken, a dip in the surf once in a day, huckle-berry expeditions with friends, and a thousand and one things to be done, while stopping at a summer watering place.

Between these “sports,” if I may be permitted to call them such, I have managed to find time to do some collecting.

The hotel at which I am stopping is situated within five hundred yards of the beach. To the north, runs a very smooth beach, devoid of rocks of any character for some fourteen miles. To the south, and extending for many miles, is a very rocky stretch. To this rocky portion, almost all of my collecting trips were confined.

Monterey is no longer the famous collecting ground it used to be. The increasing population at and around Pacific Grove is driving away all the land shells. The deadly sewerage flowing from the various towns into Monterey Bay is killing the marine shells. However, new and very interesting species are occasionally brought up from deep water by the dredge.

Early in the morning, on the 28th of June, I started by steamer from San Francisco with my shell collecting outfit, consisting of glass pill bottles for small shells, paper boxes, cigar boxes, cloth bags, long, thin pieces of wood with rubber bands attached for the Chitons, alcohol stove and pan for the killing of bodies of the shells,

cotton batting, long rubber boots, an immense sun hat, a chisel to detach *Haliotis* shells from the rocks, etc.

I arrived here at seven in the evening and although the trip down was rough, and our little "tub" rocked dreadfully, causing me to be sea-sick, it nevertheless did not prevent me from starting right in and collecting as soon as my feet rested on terra firma. On that evening, I began collecting at seven o'clock and as it was very light at that hour, I continued to collect along the beach until eight. I am very glad I did so, as it netted me some beach-washed species which I have not come across since.

I selected a week when the early morning small low tides occurred. Thus, one morning I devoted to the collection of *Haliotis cracherodii*, another morning I went in search of *Littorina planaxis*, another for *Chlorostoma costatum*, *Acmæa scabra*, *Nassa mendica*, etc.

During this second week, when no morning low tides have occurred, I have gone among the rocks, gathering any and every species which was so unfortunate, nay, I should say, fortunate, as to be placed within my reach.

Priene Oregonensis Redf. will be noted as having been collected here. I do not as yet understand how this large and beautiful northern shell should be found so far south. It could not have drifted into the bay, as it was a fresh, perfect-lipped specimen.

I may also mention that in a letter recently received from Mrs. M. Burton Williamson, of University P. O., Cal., that lady informed me that *Psammobia rubro-radiata* Nutt., is not found north of San Pedro Bay. As will be noted, I found one specimen, alive and perfect. It is truly a beautiful shell. The inside of both valves resembling delicate porcelain.

I am exceedingly sorry to think that I have no dredge here with me, as I feel positive I could gather at least five times as many specimens as I have already collected.

In the following list, the number of specimens taken is given after each name, and will serve to show the relative abundance of the species.

Arionta californiensis Lea, 51; *dupetithouarsi*, Desh., 4; *nickliniana*, Lea, 1. *Acmæa asmi* Midd., 33; *mitra* Esch., 11; *patina* Esch., 5; *pelta* Esch., 2; *persona* Esch., 2; *scabra* Nutt., 2; *spectrum* Nutt., 6. *Amphissa corrugata* Rve., 64. *Astyris gausipata* Gld., 12. *Bittium filosum* Gld., 24; *filosum* Gld. var. *esuriens*

Cpr., 2. *Calliostoma annulatum* Mart., 17; *canaliculatum* Mart., 32; *costatum* Mart., 80. *Chlorostoma brunneum* Phil., 23; *pulligo* Mart., 3; *funerale* A. Ad., 2. *Cerostoma foliatum* Gmel., 1. *Crucibulum spinosum* Sby., 9. *Crepidula edunca* Sby., 21; *rugosa* Nutt., 2; *navicelloides* Nutt., 12. *Conus californicus* Hds., 4. *Cryptomya californica* Conr., 1. *Chaetopleura hartwegii* Cpr., 11. *Chama spinosum* Sby. (?), valves only, 4. *Columbella carinata* Hds., 24. *Drillia torosa* Cpr., 5. *Erato columbella* Mke., 6; *vitellina* Hds., 6. *Fusus luteopictus* Dall, 1. *Fissurella volcano* Rve., 47. *Gadinia reticulata* Sby., 8. *Glyphis aspera* Esch., 3. *Haliotis cracherodii* Leach, 72; *fulgens* Phil., 1; *rufescens* Swains., 2. *Hipponyx tumens* Cpr., 57. *Lyonsia californica* Conr., valves only, 1. *Lottia gigantea* Gray, 44. *Lucina californica* Conr., valves only, 11. *Lucapina crenulata* Sby., 4. *Lunatia lewisii* Gld., 2. *Lamellaria stearnsiana* Dall, 1. *Leptothyra carpenteri* Pilsbry, 28. *Litorina planaxis* Gray, 83; *scutulata* Gld., 2. *Lazaria subquadrata* Cpr., 5. *Mitromorpha aspera* Cpr., 2. *Modiola fornicata* Cpr., 2. *Mangilia variegata* Cpr., 3. *Mitra maura* Swains., 1. *Marginella jewettii* Cpr., 25. *Monoceros engonatum* Conr., 2; *lapilloides* Conr., 75. *Mopalia lignosa* Gld., 3; *ciliata* Sby., 2. *Macoma inquinata* Desh., 1; *secta* Conr., valves, 2. *Mytilus californicus* Conr., 2. *Nassa californiana* Conr., 1; *fossata* Gld., 13; *mendica* Gld., 58. *Nacella inessa* Hds., 19; sp. undet., 2. *Nuttallina scabra* Rve., 29. *Olivella biplicata* Sby., 14. *Ocinebra circumtexta* Stearns, 7; *interfossa* Cpr., 7. *Priene oregonensis* Redf., 1. *Psammobia rubra-radiata* Nutt., 1. *Pedicularia californica* Newe., 12. *Purpura saxicola* Val., very large, 16; *saxicola* Val., var. *emarginata* Desh., 80. *Pachypoma inæqualis* Chem., 1. *Phasianella compta* Gld., 9. *Pecten hastatus* Sby., valves only, 4. *Pholadidea penita* Conr., 1. *Placunanomia macrochisma*, Desh. (valves), 2. *Petricola carditoides* Conr., 2. *Rupellaria lamellifera* Conr., 3. *Saxicava arctica* Linn. (valve only), 1. *Scala indianorum* Cpr., var. *tincta* Cpr., 10. *Surcula carpenteriana* Gabb., 3. *Septifer bifurcatus* Rve., 11. *Standella falcata* Gmel. (?) (valves only), 2. *Schizothærus nuttallii* Conr. (valves), 2. *Tapes staminea* Conr. (?), 3. *Trivia californica* Gray, 20. *Tellina bodogensis* Hds. (valves only), 2.